

Name_____ Date_____

Section 9.4 Controlling Static Electricity

- 1) What is the name of a person that studies weather?

- 2) Explain how lightning is created. I nclude a labeled diagram.

- 3) What is the temperature of the air near a bolt of lightning?

- 4) What does the heat cause?

- 5) What causes thunder?

- 6) What happens if a person is hit by lightning?

- 7) Explain how a lightning rod works. I nclude a labeled diagram.

- 8) Approximately how long does it take for the sound of thunder to travel one kilometer?

- 9) Using the answer to the previous question, approximately how fast is the speed of sound?

- 10) I f you saw a flash of lighting and heard the thunder 9 seconds later, approximately how far was the lightning bolt from you?

- 11) About how many lightning bolts strike the Earth every second?
- 12) Where do electrons travel most easily?
- 13) What did Benjamin Franklin first guess?
- 14) What did he do to test his theory? Include a labeled diagram.
- 15) What happened to the next two people that tried to recreate Benjamin Franklin's experiment?
- 16) Define electrostatic precipitator.
- 17) Explain how electrostatic spray painting can give an object a thin, smooth layer of paint. Include a labeled diagram.
- 18) What are the benefits of electrostatic spray painting?
- 19) What happens to clothes made of different materials when they are put into the drier together?